

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

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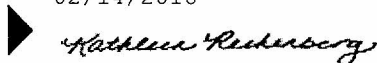
IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 02/14/2018		2. CONTRACT NO. (If any) EP-C-17-046		6. SHIP TO:	
3. ORDER NO. 0001		4. REQUISITION/REFERENCE NO. PR-R0-17-00165		a. NAME OF CONSIGNEE AWPB-MB	
5. ISSUING OFFICE (Address correspondence to) CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268				b. STREET ADDRESS US EPA-OW-OWOW-AWPD-MB 1200 PENNSYLVANIA AVE., NW MC-4503-T	
				c. CITY WASHINGTON	e. ZIP CODE 20460
7. TO: George Townsend				f. SHIP VIA	
a. NAME OF CONTRACTOR TETRA TECH, INC.				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE	
c. STREET ADDRESS 10306 EATON PL STE 340				REFERENCE YOUR:	
d. CITY FAIRFAX				Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
e. STATE VA				f. ZIP CODE 22030	
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE CPOD	
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					12. F.O.B. POINT Destination
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) 180 Days After Award	
a. INSPECTION Destination	b. ACCEPTANCE Destination			16. DISCOUNT TERMS	

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 198549560 This task order with commence on April 1, 2018. TOCOR: Jayne Carlin Max Expire Date: 03/31/2023 Continued ...					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
21. MAIL INVOICE TO:						
a. NAME RTP Finance Center		\$353,860.00				17(i) GRAND TOTAL
b. STREET ADDRESS (or P.O. Box) US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts		\$353,860.00				
c. CITY Durham		d. STATE NC	e. ZIP CODE 27711			

22. UNITED STATES OF AMERICA BY (Signature) 		02/14/2018		23. NAME (Typed) Kathleen Rechenberg TITLE: CONTRACTING/ORDERING OFFICER	
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OPTIONAL FORM 347 (Rev. 2/2012)
Prescribed by GSA/FAR 48 CFR 53.213(f)

**ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION**

PAGE NO

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IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER
02/14/2018

CONTRACT NO.
EP-C-17-046

ORDER NO.
0001

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>Admin Office: CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268 Period of Performance: 04/01/2018 to 03/31/2023</p> <p>BASE PERIOD: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters</p> <p>LOE: 3995</p> <p>Accounting Info: 17-18-B-87AR-202BD4X22-2505-1787RE7016 -001 BFY: 17 EFY: 18 Fund: B Budget Org: 87AR Program (PRC): 202BD4X22 Budget (BOC): 2505 DCN - Line ID: 1787RE7016-001 Funding Flag: Complete Funded: \$0.00</p> <p>Accounting Info: 20-B-87FN-202BD4X22-2505 BFY: 20 Fund: B Budget Org: 87FN Program (PRC): 202BD4X22 Budget (BOC): 2505 Funding Flag: Complete Funded: \$0.00</p> <p>\$100,000 is allocated from the Base Contract, EP-C-17-046, from the line of accounting cited above.</p>				353,860.00	
0002	<p>OPTION PERIOD I: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters</p> <p>LOE: 3995 (Option Line Item) 02/04/2019</p>					
0003	<p>OPTION PERIOD II: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters Continued ...</p>					
TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))					\$353,860.00	

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OPTIONAL FORM 348 (Rev. 4/2006)
Prescribed by GSA FAR (48 CFR) 53.213(f)

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO

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IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
02/14/2018	EP-C-17-046	0001

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0004	LOE: 3995 (Option Line Item) 01/03/2019 OPTION PERIOD III: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters LOE: 3395 (Option Line Item) 02/03/2022					
0005	OPTION PERIOD IV: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters LOE: 3395 (Option Line Item) 02/07/2023					
9999	Administrative Action Tracking (Option Line Item) 180 Days After Award (Not Separately Priced)		HR			
TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))					\$0.00	

**1552.217-71 OPTION TO EXTEND THE TERM OF THE CONTRACT-COST-TYPE
CONTRACT (APR 1984)**

The Government has the option to extend the term of this contract for four (4) additional period(s). If more than 30 days remain in the contract period of performance, the Government, without prior written notification, may exercise this option by issuing a contract modification. To exercise this option within the last 30 days of the period of performance, the Government must provide to the Contractor written notification prior to that last 30-days of the period. This preliminary notification does not commit the Government to exercising the option. Use of an option will result in the following contract modifications:

(a) The "Period of Performance" clause will be amended to cover a base period and option periods

Period	Start Date	End Date
Base Period	04/01/2018 – 03/31/2019	
Option Period 1	04/01/2019 – 03/31/2020	
Option Period 2	04/01/2020 – 03/31/2021	
Option Period 3	04/01/2021 – 03/31/2022	
Option Period 4	04/01/2022– 03/31/2023	

(b) Paragraph (a) of the "Level of Effort" clause will be amended to reflect a new and separate level of effort of:

Period	Level of Effort
Base Period	3395
Option Period 1	3395
Option Period 2	3395
Option Period 3	3395
Option Period 4	3395

(c) The "Estimated Cost and Fixed Fee" clause will be amended to reflect increased estimated costs and fixed fee for each option period as follows:

Period	Estimated Cost	Fixed Fee	Total CPFF
Option Period 1	(b)(4)	(b)(4)	\$360,873
Option Period 2			\$367,886
Option Period 3			\$374,901
Option Period 4			\$381,915

(d) If the contract contains "not to exceed amounts" for elements of other direct costs (ODC), those amounts will be increased as follows: N/A

LOCAL CLAUSES EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of base fee. The amount allotted for costs is estimated to cover the contractor's performance through 07/13/2018

(b) When the contract is fully funded (i.e. the sum of the total estimated cost, base fee, award fee pool available for award, and award fee awarded, as set forth in the schedule of this contract), the Limitation of Cost clause shall become applicable.

Base Period (4/1/2018 -3/31/2019)

	Estimated Cost	Fixed Fee	Cost Plus Fixed Fee
Task Order Award (Base Period)	(b)(4)	(b)(4)	\$100,000.00
Total Funded			\$100,000.00
Total Task Order			\$353,860.00
Balance Unfunded			\$253,860.00

LOCAL CLAUSES EPA-B-16-102 ESTIMATED COST AND FIXED FEE

(a) The estimated cost of this contract is (b)(4)

(b) The fixed fee is (b)(4)

(c) The total estimated cost and fixed fee is \$353,860.00

LOCAL CLAUSE EPA-G-42-101 CONTRACT ADMINISTRATION REPRESENTATIVES

Task Order-Level Contracting Officers Representatives (CORs)/Project Officers for this task order are as follows:

TOCOR: Jayne Carlin, carlin.jayne@epa.gov.

Alternate COR: Jayshika Ramrakha, Ramrakha.jayshika@Epamail.epa.gov

Contracting Officials responsible for administering this task order are as follows:

Contracting Officer:

Katie Rechenberg

rechenberg.kathleen@epa.gov

513-487-2853

**PERFORMANCE WORK STATEMENT
TSAWP MULTIPLE AWARD CONTRACT TASK ORDER
PR-R0-17-00165**

TITLE: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters

BACKGROUND:

Section 303(d) of the Clean Water Act (CWA) requires States and Tribes to develop lists of waters that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. Current EPA regulations specify that these lists are developed every two years. The CWA also requires that States and Tribes develop Total Maximum Daily Loads (TMDLs) to bring 303(d) listed waters back into compliance with the water quality standards (WQS) for waters on the CWA Section 303(d) lists. TMDLs are watershed scale water quality and pollutant source analyses that determine the amounts of pollution that streams could receive and still meet applicable water quality standards. A TMDL identifies and quantifies sources of pollution causing water quality standard exceedances. The quantification is done by estimating the pollutant load from each source. These loads are then used to determine the amount of reductions needed to meet water quality standards. TMDLs are implemented through the point source programs (i.e. NPDES) and nonpoint source pollution control programs. Generally, EPA's role is to provide information and assistance to states to support the TMDL development and implementation; however, in some cases, EPA will take the lead in developing TMDLs or portions of the TMDLs.

The TMDL Program is in a period of transition nationwide as the lawsuits, especially in EPA Region 10, move from failure to develop TMDLs to the content of the TMDL. Additionally, States are interested in developing TMDLs that would more readily lead to implementation (and thus, WQS attainment) – that is, “implementation-ready TMDLs.” Although such TMDLs would take more time and resources to develop, they are consistent with EPA's increasing focus on implementation activities that achieve water quality improvement. EPA and the States need to demonstrate the functional connection between TMDL targets, implementation actions, and ecological responses, including progress made towards meeting water quality standards. There is a real need for feedback to determine if the actions taken in addressing water quality impairments are effective in order to support and direct future actions including revising TMDLs.

This task order will support EPA in advancing the TMDL development and implementation.

LEVEL OF EFFORT:

It is anticipated that the number of hours required for each period is as follows:

Base Year: 3,395 hours
Option Year 1: 3,395 hours
Option Year 2: 3,395 hours
Option Year 3: 3,395 hours
Option Year 4: 3,395 hours

TASKS:

After task order (TO) award and initiation of Task 1, the Task Order Contracting Officer Representative (TOCOR) shall furnish technical direction (TD) on a case-by-case basis. The Contractor shall anticipate working with the TOCOR and EPA/state technical staff; however, TOCOR, the EPA Alternate TOCOR (if the TOCOR is on leave or travel), the EPA Contract Level Contracting Officer Representative (CL-

COR) and the EPA Contracting Officer (CO) are the only individuals authorized to issue technical direction. Other government personnel may engage in technical communications with the contractor, but are not authorized to give technical direction.

Task 1: Kickoff Meeting, Reporting and Communication

The Contractor shall participate in a Kickoff Meeting with the TOCOR via conference call at the beginning of each option period and new project in which the TOCOR intends to issue a TD. The Kickoff Meeting with the TOCOR shall cover the following topics: points of contact, roles and responsibilities, quality assurance protocols, timelines, the schedule of benchmarks, milestones and deliverables, establish dates and times for monthly calls and monthly technical progress reports and general TO administrative information.

The TOCOR shall coordinate and set-up calls between EPA staff and the Contractor's technical lead to discuss the status and progress of the work under this TO as appropriate. Unless told otherwise by the TOCOR, the Contractor shall provide meeting summaries after the calls within five (5) business days in draft form for the TOCOR to review. The TOCOR shall provide any edits and/or comments on each meeting summary or approve the meeting summary without change; then the final written meeting summary shall be provided within five (5) business days after receipt of comments from the TOCOR.

The Contractor shall notify the EPA TOCOR of any problems, delays or questions as soon as they arise, including immediate notification of any quality assurance issues and project delays. The Contractor shall provide a monthly progress report in accordance with contract requirements, which will be used for invoice review purposes. The Contractor shall provide additional monthly reports that includes the funding status for each project under this task order and Contractor's technical lead for each project. All reporting shall be provided in accordance with the contract sections G & H: ***Reporting and Deliverables (General Performance)***.

Task 1 Deliverables:

- Conference calls and meeting summaries,
- Immediate notification to TOCOR of any delays via email
- Monthly progress reports
- Timely communication.

See Contract Level Quality Assurance Surveillance Plan for specific performance standards and indicators related to this task. All written materials must be compliant with Section 508 of the Americans with Disabilities Act.

The Contractor shall provide support through one or more of the below activities (written technical direction will be used to clarify work):

Task 2: Development of TMDLs

- The Contractor shall provide technical support for the development and implementation of TMDLs for the waterbodies identified by the EPA TOCOR and that are located in Alaska, Idaho, Washington and Oregon. That support could include the following activities:
- Gather and evaluate existing data from public and private sources, and make recommendations on collection of new data to fill data gaps.
- Establish numeric TMDL targets or surrogate targets.
- Assess existing conditions.
- Conduct source analysis and analytical linkages between elements.
- Estimate loading capacity and TMDLs and allocate loads.
- Determine actions needed to address key sources.
- Complete assessment, analysis, and modeling efforts to establish draft TMDLs.

- Translate load allocations into daily loads using load duration curves and other methods.
- Prepare responses to public comments on technical portions of the TMDLs.
- Make recommendations for implementing TMDLs and monitoring towards the impaired waters to meet water quality standards.
- Incorporate various approaches for including Reasonable Assurance documentation into TMDLs, including approaches needed to incorporate nonpoint sources more effectively into ongoing TMDL development and implementation. This could include 1) providing technical assistance to estimate the current NPS load by sector, and a method for estimating expected NPS reductions by sector (e.g., type of Best Management Practices (BMP), how many will be applied, their pollutant reduction efficiencies, etc.); 2) development of an adaptive management procedure for reviewing key milestone progress and revising BMP to meet the TMDL target loads; 3) establishing a procedure for site-specific evaluation of water bodies with significant NPS pollution loads; 4) tracking the progress of NPS control implementation; and 5) developing a monitoring and reduction tracking system. Another approach is to include (1) an identification of total NPS existing loads and total NPS load reductions necessary to meet water quality standards, by source type; (2) a detailed identification of the causes and sources of NPS pollution by source type to be addressed in order to achieve the load reductions specified in the TMDL (e.g., acres of various row crops, number and size of animal feedlots, acres and density of residential areas); and (3) an analysis of the NPS management measures by source type expected to be implemented to achieve the necessary load reductions, with the recognition that adaptive management may be necessary during implementation.
- Develop or modify TMDL implementation plans that meet both TMDL requirements and requirements for nonpoint source (NPS) watershed based plans listed in *Nonpoint Source Program and Grants Guidelines for States and Territories* (April 13, 2013).
- Provide support to EPA and its Region 10 states in developing implementation-ready TMDLs that would more readily lead to implementation and thus, water quality standards (WQS) attainment.
- Support outreach to and coordination with public and private stakeholders to obtain information and build support for TMDLs.
- Develop EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 3: Measure TMDL Effectiveness

The Contractor shall provide support to EPA and its Region 10 states in and for the methods of measuring the effectiveness of the TMDLs that lead to improved future TMDLs. This task involves evaluating waterbodies with TMDLs (or other restoration plans) with respect to TMDL/restoration plan effectiveness and progress towards meeting WQS. The work may require the following activities:

- Evaluate and analyze data to evaluate water quality trends (including use of statistical methods) towards meeting water quality standards (WQS) and TMDL load/wasteload allocations.
- Develop stories and/or documentation showing impaired waters and/or with TMDLs that are meeting water quality goals or making significant progress towards meeting water quality goals as a result of restoration actions.
- Develop monitoring protocols to be used to evaluate TMDL effectiveness or make recommendations for developing and/or develop TMDL monitoring effectiveness plans to measure progress towards meeting WQS and TMDL load/wasteload allocations.
- Conduct an analysis of existing TMDLs including an evaluation of TMDL assumptions and data and provide recommendations for TMDL revisions.
- Develop EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 4: Training and Meeting Support on TMDLs

The Contractor shall provide training on various aspects of TMDL development and implementation and provide administrative, logistical and facilitative support in planning, facilitation and/or follow-up for Regional/State conference calls, webinars, workshops, training sessions/conferences, stakeholder/watershed group and technical meetings on impaired waters, TMDL program and/or NPS program activities for Alaska, Idaho, Oregon, and Washington waters. The work may require the following activities:

- Conduct planning activities such as generating a list of potential topics, obtaining conference call telephone numbers or meeting space, preparing announcements and agendas, developing workshop materials for all participants and developing workshop evaluation forms, soliciting attendees and papers, inviting speakers to make presentations, and developing meeting materials.
- Provide logistical and facilitation support for conference calls, meetings and webinars as well as recording webinars.
- Conduct meeting logistics, including arranging conference facilities, lodging, audio-visual needs, registering participants, logistical support for speakers and scientific/technical experts.
- Prepare minutes, summary reports, and proceeding documents and providing FTP sites to store and exchange workshop-related materials and products.

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, shall be obtained by the TOCOR as needed and provided to the CO. Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the TOCOR.

When serving in either a technical or logistical support role at conferences and workshops, Contractor staff shall only attend sessions that are relevant to their role in support of the proceedings. When the Contractor is to conduct training, the EPA will review and approve all materials and courses before presentation, ensuring the training material is factually accurate, and clear in its presentation of the EPA's views, policies, and regulations.

Task 5: Identification of Impaired Waters

The Contractor shall provide technical, logistical and administrative support to the EPA pertaining to the identification of impaired waters, including the development of listing methodologies. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 6: Water Quality Monitoring

The Contractor shall provide support for water quality monitoring pertaining to TMDL development, implementation and TMDL effectiveness. The Contractor shall provide technical, logistical, and administrative support to the EPA in: 1) designing monitoring plans, 2) the field collection of water quality samples, and/or 3) laboratory analysis of water quality samples and assessment of results. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 7: Model Application

The Contractor shall provide technical support for application and/or refinement of modeling tools used for TMDL development and implementation including assessing the impact of point and nonpoint sources on receiving waters and linkages to ground water. The Contractor shall provide technical support for the application of modeling tools for TMDL development and implementation such as determining the point and NPS controls necessary in meeting water quality objectives. This support could include quantifying the loads anticipated to be reduced by specific point or NPS control approaches, BMP selection or strategies. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 8: Peer Review

The Contractor shall provide one or more recognized independent peer-reviewers who will provide impartial evaluations of work products within the scope of this task order, including independent third party peer reviews on the technical approaches and methods (to identify any serious deficiencies and increase confidence in the technical work) of the models and model applications (including sufficiency for regulatory purposes) related to impaired waters and TMDLs. This may also include conducting a blind or anonymous peer review. When conducting peer reviews, the Contractor shall follow the EPA's Science Policy Council Handbook on *Peer Review, 4th Edition*, (EPA EPA/100/B-15/001) (2015). The handbook can be found electronically at the EPA website <http://www.epa.gov/osa/peer-review-handbook-4th-edition-2015>. The Contractor shall discuss coordination, including the specific charge, of peer reviews with the TOCOR pursuant to an approved technical direction.

SCHEDULE OF BENCHMARKS, DELIVERABLES & MILESTONES:

Deliverables and deliverable schedule shall be clarified in the final TD, developed by the TOCOR. The Contractor shall accept or provide comments of each TD in writing within five working days from receipt of each TD. The Contractor shall schedule the conference call to discuss deliverables and project details within five (5) working days of receipt of the draft TD as appropriate. The Contractor shall document the outcomes of this meeting and provide a copy to the TOCOR. The Contractor shall provide the draft written deliverable(s) for review by TOCOR and these deliverables shall be prepared in accordance with the timeframe specified in the Technical Direction to be developed by the TOCOR. The Contractor shall provide the final written deliverable(s) shall be furnished in accordance with the timeframe specified in the Technical Direction.

TASK	BENCHMARK / DELIVERABLE / MILESTONES	SCHEDULE
	Base Period	
1	Kickoff Meeting	Within 10 working days of Task Order Award and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
	OPTION PERIOD 1	
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR

1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 2		
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 3		
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 4		
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.

1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.

The Contractor shall participate in meetings and conference calls arranged by the TOCOR.

The Contractor shall, when requested by the TOCOR, provide supporting documentation when EPA is reviewing draft deliverables to facilitate EPA review and approval of the Contractor's work. Documentation shall include the electronic files and detailed, written explanation of all steps and decisions. The Contractor is expected to comply with this request when it is received from the TOCOR regardless of whether such a request is described in the individual tasks of this PWS or by technical direction. The Contractor is expected to furnish this information in such manner that no proprietary software will be needed for EPA to read, interpret, replicate or model any work product of this agreement, unless otherwise noted in this PWS or by written permission of the TOCOR. The objective is that anyone with the appropriate skill level can use the information produced under this Task Order to check or duplicate the Contractor's work for replication and/or verification. With this understanding of how this Task Order's data will be used, any elements essential to successfully replicating analysis shall be provided to EPA in a commonly-used format.

The Contractor shall provide both scientific/technical and editorial review as defined in section 2.6 of the Prime Contract Performance Work Statement on any Task Order **draft** product before submission to the TOCOR for review. This process does not need to be performed by an independent peer reviewer. It is expected that all editorial review comments will be addressed before deliverables are furnished to the

OCOR for review (in the case of draft deliverables) or acceptance (in the case of final deliverables); and that questions raised by scientific/ technical review will be either addressed or discussed with the TOCOR prior to the Contractor furnishing draft deliverables.

EPA anticipates that the contractor's work will be judged "satisfactory" according to the QASP if TOCOR edits to deliverables are no more than ten percent (10%) of the content of any draft deliverable, or less than two percent (2%) of any final deliverable. In addition, EPA anticipates that the Contractor's work will be judged "satisfactory" according to the QASP if less than ten percent (10%) of the pages of written final deliverables contain TOCOR edits for such things as grammar, punctuation and format. The TOCOR can upon request furnish a copy of the EPA correspondence manual for the Contractor's use.

Upon receipt of written technical direction from the TOCOR, the contractor shall furnish:

- All deliverables (draft and final) to EPA shall be furnished in an electronic version and in an electronic format that EPA can support (see TSAWP Contract PWS Section 4.0 Deliverables).
- All final deliverables to EPA shall include one (1) electronic copy and two (2) paper copies. All final deliverables shall be prepared according to EPA publication guidelines and shall be compliant with Section 508 of the **Americans with Disabilities Act**.

All submittals to EPA shall be formatted as described below.

Electronic submissions shall be made in the following manner: electronic Microsoft Word© for any written reports, summaries or analysis documents, Microsoft Excel© format for any and all spreadsheets, raw data, coding and modeling work (including all model runs with essential data to replicate model runs), and Microsoft Access© format for any and all databases or for other data as is approved by the EPA TOCOR in writing. Final electronic submissions shall be on Compact Disk (CD) or Digital Versatile Disc (DVD). The contractor may utilize an FTP, but only if the EPA TOCOR gives written permission. Every electronic document and all of the sections, text, graphs, charts or figures shall be unlocked, open and editable so that EPA may make further changes.

Unless specified otherwise by the TOCOR, final paper submissions shall be made in the following manner: two (2) separate and identical copies of all deliverables must be submitted; each separate copy includes all the products due at that date (i.e., Task 1, 2, etc.), and must be submitted in one (1) or more bound volumes, as appropriate, with a title page, an executive summary describing the purpose and content, and an index, located inside the front cover of each bound volume, and electronic copies enclosed in envelopes (or other suitable means) bound in the respective volume. Although PDF versions of materials may be additionally submitted per the contractor's prerogative, neither electronic nor paper PDF versions will be acceptable as any final work product.

Appropriate electronic format that is supported by EPA and printing of all GIS data layers, maps, photos, bench sheets and other written material not easily printed or saved in the above formats will be discussed and a format agreed upon with the EPA TOCOR prior to submittal by the Contractor.

When the Task Order reaches 30 calendar days prior to the end of the Period of Performance in a given period, the Contractor shall make a determination that the deliverables, milestones, benchmarks, and any outstanding technical direction from the TOCOR, will be satisfactorily completed in the form requested in the PWS by the end of the Period of Performance and for the remaining funding that is available.

If the Contractor determines one or more of the above-referenced items will not be able to be completed in the requested form within the period of performance and with the available funding, the Contractor shall notify the TOCOR and the CO immediately. Within 5 business days of said notification, the TOCOR in coordination with the CO will provide technical direction concerning use of the remaining funding to prepare and furnish to the TOCOR all interim draft deliverables, interim work products, and any working files in an electronic format which is supported by EPA, for eventual continuation of the project after the end date of the Task Order.

QUALITY ASSURANCE PROJECT PLANS:

EPA policy requires that an *approved* Quality Assurance Project Plan (QAPP) be in place before any work begins that involves the data collection and development of models. Where a project will require a QAPP, the Contractor shall prepare the QAPP in conformance with EPA's *Requirements for Quality Assurance Project Plans (EPA QA/R-5)*, and obtain EPA Region 10 approval for the QAPP. No activities requiring a QAPP shall begin without EPA approval of the QAPP.

CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The EPA projects that none of the individual meetings identified in these tasks will exceed a total cost of \$20,000. The Contractor shall immediately notify the CO, PO and TOCOR of any anticipated individual event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all

direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the CO.

REPORTING:

All documentation and reporting under this TO shall be in compliance with contract requirements.

Additional requirements specific to this TO are as follows:

The Contractor's progress reports shall include, but not be limited to, the following items: Contactor technical lead and status of funds allotted and spent for each project under the TO.

During the period of performance of this TO, the Contractor is expected to immediately inform the TOCOR by telephone of: (1) any problems that may impede the successful completion of the requested items of work; and (2) any corrective actions needed to solve the problem. The Contractor shall address and correct any problems identified by EPA within three days of EPA's written direction.

ANTICIPATED TRAVEL:

All travel under this Task Order shall be in compliance with contract requirements and only according to specific Technical Direction. (See contract clause H-17). For planning purposes, assume two 2- day meetings and/or watershed site visits during the base and each option period would be located in Seattle, Washington.

CONTRACTOR IDENTIFICATION:

The Contractor staff shall be required to identify themselves as contractors whenever their EPA work brings them in contact with the public (such as when they are providing technical information or conducting training and conferences). Contractor staff must always wear Contractor ID badges when interacting with the public. Contractor personnel are prohibited from acting as the Agency's official representative.

The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

MONITORING INFORMATION IN STORET AND FOLLOW-ON DATA SYSTEMS:

Any ambient water quality, chemical, physical, biological, sediment, tissue, and ecological monitoring data collected as part of any this task order shall be entered into STORET or its follow-on data systems and be made available to the EPA in a compatible format. The Contractor shall use its own company name as the entity for data collected by the Contractor when entering its data. The Contractor shall report quality control of the data upload to the EPA.

QUALITY ASSURANCE SURVEILLANCE PLAN:

See contract requirements.

SECTION 508 CCOMPLIANCE

All electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. The Contractor shall include documentation which indicates that the contractor has tested the deliverable against applicable Section 508 Standards.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 5	
2. AMENDMENT/MODIFICATION NO. P00001		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-R0-18-00225	
6. ISSUED BY CP0D US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268		7. ADMINISTERED BY (If other than Item 6)		5. PROJECT NO. (If applicable)	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TETRA TECH, INC. Attn: George Townsend 10306 EATON PL STE 340 FAIRFAX VA 22030		(X)		9A. AMENDMENT OF SOLICITATION NO.	
CODE 198549560		FACILITY CODE		9B. DATED (SEE ITEM 11)	
		X		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-17-046 0001	
				10B. DATED (SEE ITEM 13) 02/14/2018	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
See Schedule
Net Increase: \$428,284.00

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 52.232-20 Limitation of Cost and FAR 52.243-2 Changes-Cost Reimbursement
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not. ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 198549560

The purpose of this modification is to 1) Increase the Base Period LOE (3395) by 1698 hours for a total of 5093 LOE hours within the scope of the PWS; 2) Increase the Cost and Fee ceiling for the Base Period; 3) Change the Contract Administration Representatives and 4) Fully fund the Base Period.

TOCOR: Jayne Carlin Max Expire Date: 03/31/2023

LIST OF CHANGES:

Reason for Modification: Supplemental Agreement for work within scope

Total Amount for this Modification: \$174,424.00

New Total Amount for this Version: \$528,284.00

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kathleen Rechenberg	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)	16C. DATE SIGNED

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-17-046/0001/P00001	PAGE 2 OF 5
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NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Obligated Amount for this Modification: \$428,284.00</p> <p>New Total Obligated Amount for this Award: \$428,284.00</p> <p>Incremental Funded Amount changed: from \$0.00 to \$428,284.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 1</p> <p>Description changed from BASE PERIOD: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters</p> <p>LOE: 3995 to BASE PERIOD: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters</p> <p>LOE: 5093</p> <p>Total Amount changed from \$353,860.00 to \$528,284.00</p> <p>Obligated Amount for this Modification: \$428,284.00</p> <p>Incremental Funded Amount changed from \$0.00 to \$428,284.00</p> <p>FOB changed from Destination to</p> <p>CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB Amount changed from \$353,860.00 to \$528,284.00</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code: 18-19-B-87FT-000BD4-2505-1887TE8019-001</p> <p>Beginning FiscalYear 18</p> <p>Ending Fiscal Year 19</p> <p>Fund (Appropriation) B</p> <p>Budget Organization 87FT</p> <p>Program (PRC) 000BD4</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 1887TE8019-001</p> <p>Quantity: 0</p> <p>Amount: \$428,284.00</p> <p>Percent: 0</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p>Delivery: 180 Days After Award</p> <p>Delivery Location Code: OW-OWOW-AWPD-MB</p> <p>AWPB-MB</p> <p>US EPA-OW-OWOW-AWPD-MB</p> <p>1200 PENNSYLVANIA AVE., NW</p> <p>MC-4503-T</p> <p>Continued ...</p>				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-17-046/0001/P00001	PAGE	OF
		3	5

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0001	<p>WASHINGTON DC 20460</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Period of Performance: 04/01/2018 to 03/31/2023</p> <p>Change Item 0001 to read as follows (amount shown is the total amount):</p>				
	<p>BASE PERIOD: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters</p> <p>LOE: 5093</p> <p>Accounting Info: 17-18-B-87AR-202BD4X22-2505-1787RE7016-001 BFY: 17 EFY: 18 Fund: B Budget Org: 87AR Program (PRC): 202BD4X22 Budget (BOC): 2505 DCN - Line ID: 1787RE7016-001 Funding Flag: Partial Funded: \$0.00</p> <p>Accounting Info: 20-B-87FN-202BD4X22-2505 BFY: 20 Fund: B Budget Org: 87FN Program (PRC): 202BD4X22 Budget (BOC): 2505 Funding Flag: Partial Funded: \$0.00</p> <p>Accounting Info: 18-19-B-87FT-000BD4-2505-1887TE8019-001 BFY: 18 EFY: 19 Fund: B Budget Org: 87FT Program (PRC): 000BD4 Budget (BOC): 2505 DCN - Line ID: 1887TE8019-001 Funding Flag: Partial Funded: \$428,284.00</p> <p>In consideration of the modification agreed to herein as complete equitable adjustments for the Contractor's proposal dated May 16, 2018, the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such facts or circumstances giving rise to the proposal. All other terms and conditions shall remain unchanged.</p>				528,284.00

Summary of Clause Changes:

Clause, 1552.211-73, is incorporated as follows:

BASE PERIOD:

Local Clauses 1552.211-73 LEVEL OF EFFORT - COST REIMBURSEMENT TERM CONTRACT (APR 1984) DEVIATION (AUG 1985)

(a) The Contractor shall perform all work and provide all required reports within the level of effort specified below. The Government will order 5,093 direct labor hours for the option period three which represents the Government's best estimate of the level of effort required to fulfill these requirements.

(b) Direct labor includes personnel such as engineers, scientists, draftsmen, technicians, statisticians, and programmers and not support personnel such as company management, typists, and key punch operators even though such support personnel are normally treated as direct labor by the Contractor. The level of effort specified in paragraph (a) includes Contractor, subcontractor, and consultant labor hours.

(c) Under any circumstances, if the Government orders or the Contractor provides less than 90 percent of the level of effort specified for the base period or any optional period exercised, an equitable downward adjustment of the fixed fee, if any, for that period will be made. The Government may require the Contractor to provide additional effort up to 110 percent of the level of effort for any period until the estimated cost for that period has been reached. However, this additional effort shall not result in any increase in the fixed fee, if any. If this is a cost-plus-incentive-fee (CPIF) contract, the term "fee" in this paragraph means "base fee and incentive fee." If this is a cost-plus-award-fee (CPAF) contract, the term "fee" in this paragraph means "base fee and award fee."

(d) If the level of effort specified to be ordered during a given base or option period is not ordered during that period, that level of effort may not be accumulated and ordered during a subsequent period.

(e) These terms and conditions do not supersede the requirements of either the "Limitation of Cost" or "Limitation of Funds" clauses.

(end of clause)

LOCAL CLAUSES EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of base fee. The amount allotted for costs is estimated to cover the contractor's performance through 03/31/2019.

(b) When the contract is fully funded (i.e. the sum of the total estimated cost, base fee, award fee pool available for award, and award fee awarded, as set forth in the schedule of this contract), the Limitation of Cost clause shall become applicable.

Base Period (4/1/2018 -3/31/2019)

	Estimated Cost	Fixed Fee	Cost Plus Fixed Fee
Task Order Award (Base Period)	(b)(4)		\$100,000.00
Modification 1			\$428,284.00
Total Funded			\$528,284.00
Total Task Order			\$528,284.00
Balance Unfunded			\$0.00

LOCAL CLAUSES EPA-B-16-102 ESTIMATED COST AND FIXED FEE

- (a) The estimated cost of this contract is (b)(4)
- (b) The fixed fee is (b)(4)
- (c) The total estimated cost and fixed fee is **\$528,284**

LOCAL CLAUSE EPA-G-42-101 CONTRACT ADMINISTRATION REPRESENTATIVES

Task Order-Level Contracting Officers Representatives (CORs)/Project Officers for this task order are as follows:

Contracting Officials responsible for administering this task order are as follows:

Contracting Officer:

Angela Lower
lower.angela@epa.gov
513-487-2036

Contract Specialist:

Lisa Mitchell-Flinn
Mitchell-flinn.lisa@epa.gov
513-487-2852

**PERFORMANCE WORK STATEMENT
TSAWP MULTIPLE AWARD CONTRACT TASK ORDER
PR-R0-17-00165**

TITLE: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters

BACKGROUND:

Section 303(d) of the Clean Water Act (CWA) requires States and Tribes to develop lists of waters that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. Current EPA regulations specify that these lists are developed every two years. The CWA also requires that States and Tribes develop Total Maximum Daily Loads (TMDLs) to bring 303(d) listed waters back into compliance with the water quality standards (WQS) for waters on the CWA Section 303(d) lists. TMDLs are watershed scale water quality and pollutant source analyses that determine the amounts of pollution that streams could receive and still meet applicable water quality standards. A TMDL identifies and quantifies sources of pollution causing water quality standard exceedances. The quantification is done by estimating the pollutant load from each source. These loads are then used to determine the amount of reductions needed to meet water quality standards. TMDLs are implemented through the point source programs (i.e. NPDES) and nonpoint source pollution control programs. Generally, EPA's role is to provide information and assistance to states to support the TMDL development and implementation; however, in some cases, EPA will take the lead in developing TMDLs or portions of the TMDLs.

The TMDL Program is in a period of transition nationwide as the lawsuits, especially in EPA Region 10, move from failure to develop TMDLs to the content of the TMDL. Additionally, States are interested in developing TMDLs that would more readily lead to implementation (and thus, WQS attainment) – that is, “implementation-ready TMDLs.” Although such TMDLs would take more time and resources to develop, they are consistent with EPA's increasing focus on implementation activities that achieve water quality improvement. EPA and the States need to demonstrate the functional connection between TMDL targets, implementation actions, and ecological responses, including progress made towards meeting water quality standards. There is a real need for feedback to determine if the actions taken in addressing water quality impairments are effective in order to support and direct future actions including revising TMDLs.

This task order will support EPA in advancing the TMDL development and implementation.

LEVEL OF EFFORT:

It is anticipated that the number of hours required for each period is as follows:

Base Year: 5093 hours
Option Year 1: 3,395 hours
Option Year 2: 3,395 hours
Option Year 3: 3,395 hours
Option Year 4: 3,395 hours

TASKS:

After task order (TO) award and initiation of Task 1, the Task Order Contracting Officer Representative (TOCOR) shall furnish technical direction (TD) on a case-by-case basis. The Contractor shall anticipate working with the TOCOR and EPA/state technical staff; however, TOCOR, the EPA Alternate TOCOR (if the TOCOR is on leave or travel), the EPA Contract Level Contracting Officer Representative (CL-

COR) and the EPA Contracting Officer (CO) are the only individuals authorized to issue technical direction. Other government personnel may engage in technical communications with the contractor, but are not authorized to give technical direction.

Task 1: Kickoff Meeting, Reporting and Communication

The Contractor shall participate in a Kickoff Meeting with the TOCOR via conference call at the beginning of each option period and new project in which the TOCOR intends to issue a TD. The Kickoff Meeting with the TOCOR shall cover the following topics: points of contact, roles and responsibilities, quality assurance protocols, timelines, the schedule of benchmarks, milestones and deliverables, establish dates and times for monthly calls and monthly technical progress reports and general TO administrative information.

The TOCOR shall coordinate and set-up calls between EPA staff and the Contractor's technical lead to discuss the status and progress of the work under this TO as appropriate. Unless told otherwise by the TOCOR, the Contractor shall provide meeting summaries after the calls within five (5) business days in draft form for the TOCOR to review. The TOCOR shall provide any edits and/or comments on each meeting summary or approve the meeting summary without change; then the final written meeting summary shall be provided within five (5) business days after receipt of comments from the TOCOR.

The Contractor shall notify the EPA TOCOR of any problems, delays or questions as soon as they arise, including immediate notification of any quality assurance issues and project delays. The Contractor shall provide a monthly progress report in accordance with contract requirements, which will be used for invoice review purposes. The Contractor shall provide additional monthly reports that includes the funding status for each project under this task order and Contractor's technical lead for each project. All reporting shall be provided in accordance with the contract sections G & H: **Reporting and Deliverables (General Performance)**.

Task 1 Deliverables:

- Conference calls and meeting summaries,
- Immediate notification to TOCOR of any delays via email
- Monthly progress reports
- Timely communication.

See Contract Level Quality Assurance Surveillance Plan for specific performance standards and indicators related to this task. All written materials must be compliant with Section 508 of the Americans with Disabilities Act.

The Contractor shall provide support through one or more of the below activities (written technical direction will be used to clarify work):

Task 2: Development of TMDLs

- The Contractor shall provide technical support for the development and implementation of TMDLs for the waterbodies identified by the EPA TOCOR and that are located in Alaska, Idaho, Washington and Oregon. That support could include the following activities:
- Gather and evaluate existing data from public and private sources, and make recommendations on collection of new data to fill data gaps.
- Establish numeric TMDL targets or surrogate targets.
- Assess existing conditions.
- Conduct source analysis and analytical linkages between elements.
- Estimate loading capacity and TMDLs and allocate loads.
- Determine actions needed to address key sources.
- Complete assessment, analysis, and modeling efforts to establish draft TMDLs.

- Translate load allocations into daily loads using load duration curves and other methods.
- Prepare responses to public comments on technical portions of the TMDLs.
- Make recommendations for implementing TMDLs and monitoring towards the impaired waters to meet water quality standards.
- Incorporate various approaches for including Reasonable Assurance documentation into TMDLs, including approaches needed to incorporate nonpoint sources more effectively into ongoing TMDL development and implementation. This could include 1) providing technical assistance to estimate the current NPS load by sector, and a method for estimating expected NPS reductions by sector (e.g., type of Best Management Practices (BMP), how many will be applied, their pollutant reduction efficiencies, etc.); 2) development of an adaptive management procedure for reviewing key milestone progress and revising BMP to meet the TMDL target loads; 3) establishing a procedure for site-specific evaluation of water bodies with significant NPS pollution loads; 4) tracking the progress of NPS control implementation; and 5) developing a monitoring and reduction tracking system. Another approach is to include (1) an identification of total NPS existing loads and total NPS load reductions necessary to meet water quality standards, by source type; (2) a detailed identification of the causes and sources of NPS pollution by source type to be addressed in order to achieve the load reductions specified in the TMDL (e.g., acres of various row crops, number and size of animal feedlots, acres and density of residential areas); and (3) an analysis of the NPS management measures by source type expected to be implemented to achieve the necessary load reductions, with the recognition that adaptive management may be necessary during implementation.
- Develop or modify TMDL implementation plans that meet both TMDL requirements and requirements for nonpoint source (NPS) watershed based plans listed in *Nonpoint Source Program and Grants Guidelines for States and Territories* (April 13, 2013).
- Provide support to EPA and its Region 10 states in developing implementation-ready TMDLs that would more readily lead to implementation and thus, water quality standards (WQS) attainment.
- Support outreach to and coordination with public and private stakeholders to obtain information and build support for TMDLs.
- Develop EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 3: Measure TMDL Effectiveness

The Contractor shall provide support to EPA and its Region 10 states in and for the methods of measuring the effectiveness of the TMDLs that lead to improved future TMDLs. This task involves evaluating waterbodies with TMDLs (or other restoration plans) with respect to TMDL/restoration plan effectiveness and progress towards meeting WQS. The work may require the following activities:

- Evaluate and analyze data to evaluate water quality trends (including use of statistical methods) towards meeting water quality standards (WQS) and TMDL load/wasteload allocations.
- Develop stories and/or documentation showing impaired waters and/or with TMDLs that are meeting water quality goals or making significant progress towards meeting water quality goals as a result of restoration actions.
- Develop monitoring protocols to be used to evaluate TMDL effectiveness or make recommendations for developing and/or develop TMDL monitoring effectiveness plans to measure progress towards meeting WQS and TMDL load/wasteload allocations.
- Conduct an analysis of existing TMDLs including an evaluation of TMDL assumptions and data and provide recommendations for TMDL revisions.
- Develop EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 4: Training and Meeting Support on TMDLs

The Contractor shall provide training on various aspects of TMDL development and implementation and provide administrative, logistical and facilitative support in planning, facilitation and/or follow-up for Regional/State conference calls, webinars, workshops, training sessions/conferences, stakeholder/watershed group and technical meetings on impaired waters, TMDL program and/or NPS program activities for Alaska, Idaho, Oregon, and Washington waters. The work may require the following activities:

- Conduct planning activities such as generating a list of potential topics, obtaining conference call telephone numbers or meeting space, preparing announcements and agendas, developing workshop materials for all participants and developing workshop evaluation forms, soliciting attendees and papers, inviting speakers to make presentations, and developing meeting materials.
- Provide logistical and facilitation support for conference calls, meetings and webinars as well as recording webinars.
- Conduct meeting logistics, including arranging conference facilities, lodging, audio-visual needs, registering participants, logistical support for speakers and scientific/technical experts.
- Prepare minutes, summary reports, and proceeding documents and providing FTP sites to store and exchange workshop-related materials and products.

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, shall be obtained by the TOCOR as needed and provided to the CO. Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the TOCOR.

When serving in either a technical or logistical support role at conferences and workshops, Contractor staff shall only attend sessions that are relevant to their role in support of the proceedings. When the Contractor is to conduct training, the EPA will review and approve all materials and courses before presentation, ensuring the training material is factually accurate, and clear in its presentation of the EPA's views, policies, and regulations.

Task 5: Identification of Impaired Waters

The Contractor shall provide technical, logistical and administrative support to the EPA pertaining to the identification of impaired waters, including the development of listing methodologies. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 6: Water Quality Monitoring

The Contractor shall provide support for water quality monitoring pertaining to TMDL development, implementation and TMDL effectiveness. The Contractor shall provide technical, logistical, and administrative support to the EPA in: 1) designing monitoring plans, 2) the field collection of water quality samples, and/or 3) laboratory analysis of water quality samples and assessment of results. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 7: Model Application

The Contractor shall provide technical support for application and/or refinement of modeling tools used for TMDL development and implementation including assessing the impact of point and nonpoint sources on receiving waters and linkages to ground water. The Contractor shall provide technical support for the application of modeling tools for TMDL development and implementation such as determining the point and NPS controls necessary in meeting water quality objectives. This support could include quantifying the loads anticipated to be reduced by specific point or NPS control

approaches, BMP selection or strategies. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 8: Peer Review

The Contractor shall provide one or more recognized independent peer-reviewers who will provide impartial evaluations of work products within the scope of this task order, including independent third party peer reviews on the technical approaches and methods (to identify any serious deficiencies and increase confidence in the technical work) of the models and model applications (including sufficiency for regulatory purposes) related to impaired waters and TMDLs. This may also include conducting a blind or anonymous peer review. When conducting peer reviews, the Contractor shall follow the EPA's Science Policy Council Handbook on *Peer Review, 4th Edition*, (EPA EPA/100/B-15/001) (2015). The handbook can be found electronically at the EPA website <http://www.epa.gov/osa/peer-review-handbook-4th-edition-2015>. The Contractor shall discuss coordination, including the specific charge, of peer reviews with the TOCOR pursuant to an approved technical direction.

SCHEDULE OF BENCHMARKS, DELIVERABLES & MILESTONES:

Deliverables and deliverable schedule shall be clarified in the final TD, developed by the TOCOR. The Contractor shall accept or provide comments of each TD in writing within five working days from receipt of each TD. The Contractor shall schedule the conference call to discuss deliverables and project details within five (5) working days of receipt of the draft TD as appropriate. The Contractor shall document the outcomes of this meeting and provide a copy to the TOCOR. The Contractor shall provide the draft written deliverable(s) for review by TOCOR and these deliverables shall be prepared in accordance with the timeframe specified in the Technical Direction to be developed by the TOCOR. The Contractor shall provide the final written deliverable(s) shall be furnished in accordance with the timeframe specified in the Technical Direction.

TASK	BENCHMARK / DELIVERABLE / MILESTONES	SCHEDULE
	Base Period	
1	Kickoff Meeting	Within 10 working days of Task Order Award and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
	OPTION PERIOD 1	
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.

1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 2		
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 3		
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 4		

1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.

The Contractor shall participate in meetings and conference calls arranged by the TOCOR.

The Contractor shall, when requested by the TOCOR, provide supporting documentation when EPA is reviewing draft deliverables to facilitate EPA review and approval of the Contractor's work. Documentation shall include the electronic files and detailed, written explanation of all steps and decisions. The Contractor is expected to comply with this request when it is received from the TOCOR regardless of whether such a request is described in the individual tasks of this PWS or by technical direction. The Contractor is expected to furnish this information in such manner that no proprietary software will be needed for EPA to read, interpret, replicate or model any work product of this agreement, unless otherwise noted in this PWS or by written permission of the TOCOR. The objective is that anyone with the appropriate skill level can use the information produced under this Task Order to check or duplicate the Contractor's work for replication and/or verification. With this understanding of how this Task Order's data will be used, any elements essential to successfully replicating analysis shall be provided to EPA in a commonly-used format.

The Contractor shall provide both scientific/technical and editorial review as defined in section 2.6 of the Prime Contract Performance Work Statement on any Task Order **draft** product before submission to the TOCOR for review. This process does not need to be performed by an independent peer reviewer. It is expected that all editorial review comments will be addressed before deliverables are furnished to the

OCOR for review (in the case of draft deliverables) or acceptance (in the case of final deliverables); and that questions raised by scientific/ technical review will be either addressed or discussed with the TOCOR prior to the Contractor furnishing draft deliverables.

EPA anticipates that the contractor's work will be judged "satisfactory" according to the QASP if TOCOR edits to deliverables are no more than ten percent (10%) of the content of any draft deliverable, or less than two percent (2%) of any final deliverable. In addition, EPA anticipates that the Contractor's work will be judged "satisfactory" according to the QASP if less than ten percent (10%) of the pages of written final deliverables contain TOCOR edits for such things as grammar, punctuation and format. The TOCOR can upon request furnish a copy of the EPA correspondence manual for the Contractor's use.

Upon receipt of written technical direction from the TOCOR, the contractor shall furnish:

- All deliverables (draft and final) to EPA shall be furnished in an electronic version and in an electronic format that EPA can support (see TSAWP Contract PWS Section 4.0 Deliverables).

- All final deliverables to EPA shall include one (1) electronic copy and two (2) paper copies. All final deliverables shall be prepared according to EPA publication guidelines and shall be compliant with Section 508 of the **Americans with Disabilities Act**.

All submittals to EPA shall be formatted as described below.

Electronic submissions shall be made in the following manner: electronic Microsoft Word© for any written reports, summaries or analysis documents, Microsoft Excel© format for any and all spreadsheets, raw data, coding and modeling work (including all model runs with essential data to replicate model runs), and Microsoft Access© format for any and all databases or for other data as is approved by the EPA TOCOR in writing. Final electronic submissions shall be on Compact Disk (CD) or Digital Versatile Disc (DVD). The contractor may utilize an FTP, but only if the EPA TOCOR gives written permission. Every electronic document and all of the sections, text, graphs, charts or figures shall be unlocked, open and editable so that EPA may make further changes.

Unless specified otherwise by the TOCOR, final paper submissions shall be made in the following manner: two (2) separate and identical copies of all deliverables must be submitted; each separate copy includes all the products due at that date (i.e., Task 1, 2, etc.), and must be submitted in one (1) or more bound volumes, as appropriate, with a title page, an executive summary describing the purpose and content, and an index, located inside the front cover of each bound volume, and electronic copies enclosed in envelopes (or other suitable means) bound in the respective volume. Although PDF versions of materials may be additionally submitted per the contractor's prerogative, neither electronic nor paper PDF versions will be acceptable as any final work product.

Appropriate electronic format that is supported by EPA and printing of all GIS data layers, maps, photos, bench sheets and other written material not easily printed or saved in the above formats will be discussed and a format agreed upon with the EPA TOCOR prior to submittal by the Contractor.

When the Task Order reaches 30 calendar days prior to the end of the Period of Performance in a given period, the Contractor shall make a determination that the deliverables, milestones, benchmarks, and any outstanding technical direction from the TOCOR, will be satisfactorily completed in the form requested in the PWS by the end of the Period of Performance and for the remaining funding that is available.

If the Contractor determines one or more of the above-referenced items will not be able to be completed in the requested form within the period of performance and with the available funding, the Contractor shall notify the TOCOR and the CO immediately. Within 5 business days of said notification, the TOCOR in coordination with the CO will provide technical direction concerning use of the remaining funding to prepare and furnish to the TOCOR all interim draft deliverables, interim work products, and any working files in an electronic format which is supported by EPA, for eventual continuation of the project after the end date of the Task Order.

QUALITY ASSURANCE PROJECT PLANS:

EPA policy requires that an *approved* Quality Assurance Project Plan (QAPP) be in place before any work begins that involves the data collection and development of models. Where a project will require a QAPP, the Contractor shall prepare the QAPP in conformance with EPA's *Requirements for Quality Assurance Project Plans (EPA QA/R-5)*, and obtain EPA Region 10 approval for the QAPP. No activities requiring a QAPP shall begin without EPA approval of the QAPP.

CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The EPA projects that none of the individual meetings identified in these tasks will exceed a total cost of

\$20,000. The Contractor shall immediately notify the CO, PO and TOCOR of any anticipated individual event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the CO.

REPORTING:

All documentation and reporting under this TO shall be in compliance with contract requirements.

Additional requirements specific to this TO are as follows:

The Contractor's progress reports shall include, but not be limited to, the following items: Contactor technical lead and status of funds allotted and spent for each project under the TO.

During the period of performance of this TO, the Contractor is expected to immediately inform the TOCOR by telephone of: (1) any problems that may impede the successful completion of the requested items of work; and (2) any corrective actions needed to solve the problem. The Contractor shall address and correct any problems identified by EPA within three days of EPA's written direction.

ANTICIPATED TRAVEL:

All travel under this Task Order shall be in compliance with contract requirements and only according to specific Technical Direction. (See contract clause H-17). For planning purposes, assume two 2- day meetings and/or watershed site visits during the base and each option period would be located in Seattle, Washington.

CONTRACTOR IDENTIFICATION:

The Contractor staff shall be required to identify themselves as contractors whenever their EPA work brings them in contact with the public (such as when they are providing technical information or conducting training and conferences). Contractor staff must always wear Contractor ID badges when interacting with the public. Contractor personnel are prohibited from acting as the Agency's official representative.

The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

MONITORING INFORMATION IN STORET AND FOLLOW-ON DATA SYSTEMS:


Any ambient water quality, chemical, physical, biological, sediment, tissue, and ecological monitoring data collected as part of any this task order shall be entered into STORET or its follow-on data systems and be made available to the EPA in a compatible format. The Contractor shall use its own company name as the entity for data collected by the Contractor when entering its data. The Contractor shall report quality control of the data upload to the EPA.

QUALITY ASSURANCE SURVEILLANCE PLAN:

See contract requirements.

SECTION 508 CCOMPLIANCE

All electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. The Contractor shall include documentation which indicates that the contractor has tested the deliverable against applicable Section 508 Standards.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 4	
2. AMENDMENT/MODIFICATION NO. P00002		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-R0-19-00178	
5. PROJECT NO. (If applicable)		6. ISSUED BY CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001		7. ADMINISTERED BY (If other than Item 6) CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TETRA TECH, INC. Attn: George Townsend 10306 EATON PL STE 340 FAIRFAX VA 22030		(X)		9A. AMENDMENT OF SOLICITATION NO.	
CODE 198549560		FACILITY CODE		9B. DATED (SEE ITEM 11)	
		X		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-17-046 0001	
				10B. DATED (SEE ITEM 13) 02/14/2018	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule Net Increase: \$100,000.00					
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).				
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X	D. OTHER (Specify type of modification and authority) Unilateral; 1552.217-71; Option to Extend the Term of the Contract				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) DUNS Number: 198549560 TOCOR: Jayne Carlin Max Expire Date: 03/31/2023 Invoice Approver: Jayne Carlin Alt Invoice App: Jayshika Ramrakha LIST OF CHANGES: The purpose of this modification is to 1) Exercise Option Period 1; and 2) Incrementally fund the Option Period 1 by \$100,000.00 (b)(4) to cost and (b)(4) to fixed fee), as indicated in the attached recapitulation of funds. Reason for Modification: Exercise an Option Total Amount for this Modification: \$0.00 Continued ... Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Sandra Stargardt-Licis			
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	
				16C. DATE SIGNED 03/12/2019	

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CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED

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NAME OF OFFEROR OR CONTRACTOR

TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>New Total Amount for this Version: \$360,873.00 New Total Amount for this Award: \$2,013,859.00 Obligated Amount for this Modification: \$100,000.00 New Total Obligated Amount for this Award: \$528,284.00</p> <p>Buyer changed from: Kathleen Rechenberg to: Lawrence Edelman</p> <p>Contracting Officer changed from: Kathleen Rechenberg to: Sandra Stargardt-Licis</p> <p>Invoice Approving Official changed to: Jayne Carlin</p> <p>Alternate Invoice Approving Official changed to: Jayshika Ramrakha</p> <p>CHANGES FOR LINE ITEM NUMBER: 2 Obligated Amount for this Modification: \$100,000.00 Exercised option</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 19-20-B-87FT-000BD4-2505-1987TE9004-001 Beginning FiscalYear 19 Ending Fiscal Year 20 Fund (Appropriation) B Budget Organization 87FT Program (PRC) 000BD4 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1987TE9004-001 Quantity: 0 Amount: \$100,000.00 Percent: 28.25801 Subject To Funding: N</p> <p>Continued ...</p>				

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED

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NAME OF OFFEROR OR CONTRACTOR

TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Delivery: 180 Days After Award</p> <p>Delivery Location Code: OW-OWOW-AWPD-MB</p> <p>AWPB-MB</p> <p>US EPA-OW-OWOW-AWPD-MB</p> <p>1200 PENNSYLVANIA AVE., NW</p> <p>MC-4503-T</p> <p>WASHINGTON DC 20460</p> <p>Payment:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>Period of Performance: 04/01/2018 to 03/31/2023</p> <p>.</p> <p>All other terms and conditions shall remain unchanged.</p>				

LOCAL CLAUSES EPA-B-32-101 LIMITATION OF FUNDS NOTICE – Option Period 1

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of \$(b)(4) is allotted to cover estimated cost. Funding in the amount of \$(b)(4) is provided to cover the corresponding increment of base fee. The amount allotted for costs is estimated to cover the contractor's performance through 07/11/19.

(b) When the contract is fully funded (i.e. the sum of the total estimated cost, base fee, award fee pool available for award, and award fee awarded, as set forth in the schedule of this contract), the Limitation of Cost clause shall become applicable.

(c) Recapitulation of Funds

Option Period 1 (4/1/2019 -3/31/2020)			
	Estimated Cost	Fixed Fee	Cost Plus Fixed Fee
Task Order Award (Option Period 1)	(b)(4)	(b)(4)	\$100,000.00
Total Funded			\$100,000.00
Total Task Order			\$360,873.00
Balance Unfunded			\$260,873.00

LOCAL CLAUSES EPA-B-16-102 ESTIMATED COST AND FIXED FEE – Option Period 1

(a) The estimated cost of this contract is (b)(4)

(b) The fixed fee is (b)(4)

(c) The total estimated cost and fixed fee is **\$360,873.00**

LOCAL CLAUSE EPA-G-42-101 CONTRACT ADMINISTRATION REPRESENTATIVES

Task Order Contracting Officers Representatives (CORs)/Project Officers for this contract are as follows:

Task Order COR (TOCOR): Jayne Carlin, carlin.jayne@epa.gov

Alternate Task Order COR (Alt TOCOR): Jayshika Ramrakha, ramrakha.jayshika@epa.gov

Contracting Officials responsible for administering this contract are as follows:

Contracting Officer, Sandra Licis, US EPA. Cincinnati Acquisition Division, licis.sandy@epa.gov

Contract Specialist, Lawrence Edelmann, US EPA. Cincinnati Acquisition Division, edelmann.lawrence@epa.gov

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 6	
2. AMENDMENT/MODIFICATION NO. P00003		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-R0-19-00233	
5. PROJECT NO. (If applicable)		6. ISSUED BY CAD		7. ADMINISTERED BY (If other than Item 6) CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TETRA TECH, INC. Attn: George Townsend 10306 EATON PL STE 340 FAIRFAX VA 22030		9A. AMENDMENT OF SOLICITATION NO.		9B. DATED (SEE ITEM 11)	
9C. DATED (SEE ITEM 13)		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-17-046 0001		10B. DATED (SEE ITEM 13) 02/14/2018	
CODE 198549560		FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

Net Increase:

\$461,913.00

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Bilateral: Supplemental Agreement for Work Within Scope; 52.243.2: Changes - Cost Reimbursement
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 198549560

The purpose of this modification is to 1) Increase the Option Period 1 LOE hours for work within scope of the PWS (from 3,395 hours to 5,092.50 hours; an increase of 1,697.5 hours); 2) Increase the Cost and Fee ceiling for Option Period 1 (from \$360,873.00 to \$561,913.00; an increase of \$(b)(4)). Cost - from \$(b)(4) to \$(b)(4); an increase of \$(b)(4) and Fee - from \$(b)(4) to \$(b)(4); an increase of \$(b)(4) and; 3) Provide incremental funding of \$461,913.00 (\$(b)(4) to cost and \$(b)(4) to fee).

TOCOR: Jayne Carlin Max Expire Date: 03/31/2023 Invoice Approver: Jayne Carlin Alt Invoice

App: Jayshika Ramrakha

LIST OF CHANGES:

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Sandra Stargardt-Licis	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)	16C. DATE SIGNED 05/21/2019

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STANDARD FORM 30 (REV. 11/2016)
Prescribed by GSA FAR (48 CFR) 53.243

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
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NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Reason for Modification: Supplemental Agreement for work within scope</p> <p>Total Amount for this Modification: \$201,040.00 New Total Amount for this Version: \$561,913.00 New Total Amount for this Award: \$2,214,899.00 Obligated Amount for this Modification: \$461,913.00 New Total Obligated Amount for this Award: \$990,197.00</p> <p>Incremental Funded Amount changed: from \$528,284.00 to \$990,197.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 2</p> <p>Description changed from:</p> <p>OPTION PERIOD I: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters; LOE: 3995 to OPTION PERIOD I: Region 10: General TMDL Support for Alaska, Idaho, Oregon and Washington Waters; LOE: 5092.50</p> <p>Total Amount changed from \$360,873.00 to \$561,913.00 Obligated Amount for this Modification: \$461,913.00 Incremental Funded Amount changed from \$100,000.00 to \$561,913.00</p> <p>CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB Amount changed from \$360,873.00 to \$561,913.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 19-20-B-87FT-000BD4-2505-1987TE9007-001 Beginning FiscalYear 19 Ending Fiscal Year 20 Fund (Appropriation) B Budget Organization 87FT Program (PRC) 000BD4 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1987TE9007-001 Quantity: 0 Amount: \$461,913.00 Percent: 82.20365 Continued ...</p>				

CONTINUATION SHEET

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NAME OF OFFEROR OR CONTRACTOR

TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Subject To Funding: N</p> <p>Payment Address:</p> <p>Delivery: 180 Days After Award</p> <p>Delivery Location Code: OW-OWOW-AWPD-MB</p> <p>AWPB-MB</p> <p>US EPA-OW-OWOW-AWPD-MB</p> <p>1200 PENNSYLVANIA AVE., NW</p> <p>MC-4503-T</p> <p>WASHINGTON DC 20460</p> <p>Payment:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>Period of Performance: 04/01/2018 to 03/31/2023</p> <p>.</p> <p>All other terms and conditions shall remain unchanged.</p>				

SUMMARY OF CLAUSE CHANGES:

LOCAL CLAUSES 1552.211-73 LEVEL OF EFFORT - COST REIMBURSEMENT TERM CONTRACT (APR 1984) DEVIATION (AUG 1985) - OPTION PERIOD 1

(a) The Contractor shall perform all work and provide all required reports within the level of effort specified below. The Government will order **5,092.5** direct labor hours for the option period three which represents the Government's best estimate of the level of effort required to fulfill these requirements.

(b) Direct labor includes personnel such as engineers, scientists, draftsmen, technicians, statisticians, and programmers and not support personnel such as company management, typists, and key punch operators even though such support personnel are normally treated as direct labor by the Contractor. The level of effort specified in paragraph (a) includes Contractor, subcontractor, and consultant labor hours.

(c) Under any circumstances, if the Government orders or the Contractor provides less than 90 percent of the level of effort specified for the base period or any optional period exercised, an equitable downward adjustment of the fixed fee, if any, for that period will be made. The Government may require the Contractor to provide additional effort up to 110 percent of the level of effort for any period until the estimated cost for that period has been reached. However, this additional effort shall not result in any increase in the fixed fee, if any. If this is a cost-plus-incentive-fee (CPIF) contract, the term "fee" in this paragraph means "base fee and incentive fee." If this is a cost-plus-award-fee (CPAF) contract, the term "fee" in this paragraph means "base fee and award fee."

(d) If the level of effort specified to be ordered during a given base or option period is not ordered during that period, that level of effort may not be accumulated and ordered during a subsequent period.

(e) These terms and conditions do not supersede the requirements of either the "Limitation of Cost" or "Limitation of Funds" clauses.

(end of clause)

1552.217-71 OPTION TO EXTEND THE TERM OF THE CONTRACT-COST-TYPE CONTRACT (APR 1984)

The Government has the option to extend the term of this contract for four (4) additional period(s). If more than 30 days remain in the contract period of performance, the Government, without prior written notification, may exercise this option by issuing a contract modification. To exercise this option within the last 30 days of the period of performance, the Government must provide to the Contractor written notification prior to that last 30-days of the period. This preliminary notification does not commit the Government to exercising the option. Use of an option will result in the following contract modifications:

(a) The "Period of Performance" clause will be amended to cover a base period and option periods

Period	Start Date	End Date
Base Period	04/01/2018	03/31/2019
Option Period 1	04/01/2019	03/31/2020
Option Period 2	04/01/2020	03/31/2021
Option Period 3	04/01/2021	03/31/2022
Option Period 4	04/01/2022	03/31/2023

(b) Paragraph (a) of the "Level of Effort" clause will be amended to reflect a new and separate level of effort of:

Period	Level of Effort
Base Period	5,093
Option Period 1	5,092.5
Option Period 2	3,395
Option Period 3	3,395
Option Period 4	3,395

(c) The "Estimated Cost and Fixed Fee" clause will be amended to reflect increased estimated costs and fixed fee for each option period as follows:

Period	Estimated Cost	Fixed Fee	Total CPFF
Option Period 1	(b)(4)	(b)(4)	\$561,913
Option Period 2			\$367,886
Option Period 3			\$374,901
Option Period 4			\$381,915

(d) If the contract contains "not to exceed amounts" for elements of other direct costs (ODC), those amounts will be increased as follows: N/A

LOCAL CLAUSES EPA-B-32-101 LIMITATION OF FUNDS NOTICE – OPTION PERIOD 1

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of base fee. The amount allotted for costs is estimated to cover the contractor's performance through 03/31/2020.

(b) When the contract is fully funded (i.e. the sum of the total estimated cost, base fee, award fee pool available for award, and award fee awarded, as set forth in the schedule of this contract), the Limitation of Cost clause shall become applicable.

(c) Recapitulation of Funds

Option Period 1 (4/1/2019 -3/31/2020)			
	Estimated Cost	Fixed Fee	Cost Plus Fixed Fee
Task Order Award (Option Period 1)	(b)(4)	(b)(4)	\$100,000.00
Modification 00003			\$461,913.00
Total Funded			\$561,913.00
Total Task Order			\$561,913.00
Balance Unfunded			\$0.00

LOCAL CLAUSES EPA-B-16-102 ESTIMATED COST AND FIXED FEE - OPTION PERIOD 1

(a) The estimated cost of this contract is

(b) The fixed fee is

(c) The total estimated cost and fixed fee is **\$561,913.00**

**PERFORMANCE WORK STATEMENT
TSAWP MULTIPLE AWARD CONTRACT
TETRA TECH EP-C-17-046 TASK ORDER 1**

TITLE: **General TMDL Support for Alaska, Idaho, Oregon and Washington Waters**

BACKGROUND:

Section 303(d) of the Clean Water Act (CWA) requires States and Tribes to develop lists of waters that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. Current EPA regulations specify that these lists are developed every two years. The CWA also requires that States and Tribes develop Total Maximum Daily Loads (TMDLs) to bring 303(d) listed waters back into compliance with the water quality standards (WQS) for waters on the CWA Section 303(d) lists. TMDLs are watershed scale water quality and pollutant source analyses that determine the amounts of pollution that streams could receive and still meet applicable water quality standards. A TMDL identifies and quantifies sources of pollution causing water quality standard exceedances. The quantification is done by estimating the pollutant load from each source. These loads are then used to determine the amount of reductions needed to meet water quality standards. TMDLs are implemented through the point source programs (i.e. NPDES) and nonpoint source pollution control programs. Generally, EPA's role is to provide information and assistance to states to support the TMDL development and implementation; however, in some cases, EPA will take the lead in developing TMDLs or portions of the TMDLs.

The TMDL Program is in a period of transition nationwide as the lawsuits, especially in EPA Region 10, move from failure to develop TMDLs to the content of the TMDL. Additionally, States are interested in developing TMDLs that would more readily lead to implementation (and thus, WQS attainment) – that is, “implementation-ready TMDLs.” Although such TMDLs would take more time and resources to develop, they are consistent with EPA's increasing focus on implementation activities that achieve water quality improvement. EPA and the States need to demonstrate the functional connection between TMDL targets, implementation actions, and ecological responses, including progress made towards meeting water quality standards. There is a real need for feedback to determine if the actions taken in addressing water quality impairments are effective in order to support and direct future actions including revising TMDLs.

This task order will support EPA in advancing the TMDL development and implementation.

LEVEL OF EFFORT:

It is anticipated that the number of hours required for each period is as follows:

Base Year: 5092.5 hours
Option Year 1: 5092.5 hours
Option Year 2: 3,395 hours
Option Year 3: 3,395 hours
Option Year 4: 3,395 hours

TASKS:

After task order (TO) award and initiation of Task 1, the Task Order Contracting Officer Representative (TOCOR) shall furnish technical direction (TD) on a case-by-case basis. The Contractor shall anticipate working with the TOCOR and EPA/state technical staff; however, TOCOR, the EPA Alternate TOCOR (if the TOCOR is on leave or travel), the EPA Contract Level Contracting Officer Representative (CL-

COR) and the EPA Contracting Officer (CO) are the only individuals authorized to issue technical direction. Other government personnel may engage in technical communications with the contractor, but are not authorized to give technical direction.

Task 1: Kickoff Meeting, Reporting and Communication

The Contractor shall participate in a Kickoff Meeting with the TOCOR via conference call at the beginning of each option period and new project in which the TOCOR intends to issue a TD. The Kickoff Meeting with the TOCOR shall cover the following topics: points of contact, roles and responsibilities, quality assurance protocols, timelines, the schedule of benchmarks, milestones and deliverables, establish dates and times for monthly calls and monthly technical progress reports and general TO administrative information.

The TOCOR shall coordinate and set-up calls between EPA staff and the Contractor's technical lead to discuss the status and progress of the work under this TO as appropriate. Unless told otherwise by the TOCOR, the Contractor shall provide meeting summaries after the calls within five (5) business days in draft form for the TOCOR to review. The TOCOR shall provide any edits and/or comments on each meeting summary or approve the meeting summary without change; then the final written meeting summary shall be provided within five (5) business days after receipt of comments from the TOCOR.

The Contractor shall notify the EPA TOCOR of any problems, delays or questions as soon as they arise, including immediate notification of any quality assurance issues and project delays. The Contractor shall provide a monthly progress report in accordance with contract requirements, which will be used for invoice review purposes. The Contractor shall provide additional monthly reports that includes the funding status for each project under this task order and Contractor's technical lead for each project. All reporting shall be provided in accordance with the contract sections G & H: ***Reporting and Deliverables (General Performance)***.

Task 1 Deliverables:

- Conference calls and meeting summaries,
- Immediate notification to TOCOR of any delays via email
- Monthly progress reports
- Timely communication.

See Contract Level Quality Assurance Surveillance Plan for specific performance standards and indicators related to this task. All written materials must be compliant with Section 508 of the Americans with Disabilities Act.

The Contractor shall provide support through one or more of the below activities (written technical direction will be used to clarify work):

Task 2: Development of TMDLs

- The Contractor shall provide technical support for the development and implementation of TMDLs for the waterbodies identified by the EPA TOCOR and that are located in Alaska, Idaho, Washington and Oregon. That support could include the following activities:
- Gather and evaluate existing data from public and private sources, and make recommendations on collection of new data to fill data gaps.
- Establish numeric TMDL targets or surrogate targets.
- Assess existing conditions.
- Conduct source analysis and analytical linkages between elements.
- Estimate loading capacity and TMDLs and allocate loads.
- Determine actions needed to address key sources.
- Complete assessment, analysis, and modeling efforts to establish draft TMDLs.

- Translate load allocations into daily loads using load duration curves and other methods.
- Prepare responses to public comments on technical portions of the TMDLs.
- Make recommendations for implementing TMDLs and monitoring towards the impaired waters to meet water quality standards.
- Incorporate various approaches for including Reasonable Assurance documentation into TMDLs, including approaches needed to incorporate nonpoint sources more effectively into ongoing TMDL development and implementation. This could include 1) providing technical assistance to estimate the current NPS load by sector, and a method for estimating expected NPS reductions by sector (e.g., type of Best Management Practices (BMP), how many will be applied, their pollutant reduction efficiencies, etc.); 2) development of an adaptive management procedure for reviewing key milestone progress and revising BMP to meet the TMDL target loads; 3) establishing a procedure for site-specific evaluation of water bodies with significant NPS pollution loads; 4) tracking the progress of NPS control implementation; and 5) developing a monitoring and reduction tracking system. Another approach is to include (1) an identification of total NPS existing loads and total NPS load reductions necessary to meet water quality standards, by source type; (2) a detailed identification of the causes and sources of NPS pollution by source type to be addressed in order to achieve the load reductions specified in the TMDL (e.g., acres of various row crops, number and size of animal feedlots, acres and density of residential areas); and (3) an analysis of the NPS management measures by source type expected to be implemented to achieve the necessary load reductions, with the recognition that adaptive management may be necessary during implementation.
- Develop or modify TMDL implementation plans that meet both TMDL requirements and requirements for nonpoint source (NPS) watershed based plans listed in *Nonpoint Source Program and Grants Guidelines for States and Territories* (April 13, 2013).
- Provide support to EPA and its Region 10 states in developing implementation-ready TMDLs that would more readily lead to implementation and thus, water quality standards (WQS) attainment.
- Support outreach to and coordination with public and private stakeholders to obtain information and build support for TMDLs.
- Develop EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 3: Measure TMDL Effectiveness

The Contractor shall provide support to EPA and its Region 10 states in and for the methods of measuring the effectiveness of the TMDLs that lead to improved future TMDLs. This task involves evaluating waterbodies with TMDLs (or other restoration plans) with respect to TMDL/restoration plan effectiveness and progress towards meeting WQS. The work may require the following activities:

- Evaluate and analyze data to evaluate water quality trends (including use of statistical methods) towards meeting water quality standards (WQS) and TMDL load/wasteload allocations.
- Develop stories and/or documentation showing impaired waters and/or with TMDLs that are meeting water quality goals or making significant progress towards meeting water quality goals as a result of restoration actions.
- Develop monitoring protocols to be used to evaluate TMDL effectiveness or make recommendations for developing and/or develop TMDL monitoring effectiveness plans to measure progress towards meeting WQS and TMDL load/wasteload allocations.
- Conduct an analysis of existing TMDLs including an evaluation of TMDL assumptions and data and provide recommendations for TMDL revisions.
- Develop EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 4: Training and Meeting Support on TMDLs

The Contractor shall provide training on various aspects of TMDL development and implementation and provide administrative, logistical and facilitative support in planning, facilitation and/or follow-up for Regional/State conference calls, webinars, workshops, training sessions/conferences, stakeholder/watershed group and technical meetings on impaired waters, TMDL program and/or NPS program activities for Alaska, Idaho, Oregon, and Washington waters. The work may require the following activities:

- Conduct planning activities such as generating a list of potential topics, obtaining conference call telephone numbers or meeting space, preparing announcements and agendas, developing workshop materials for all participants and developing workshop evaluation forms, soliciting attendees and papers, inviting speakers to make presentations, and developing meeting materials.
- Provide logistical and facilitation support for conference calls, meetings and webinars as well as recording webinars.
- Conduct meeting logistics, including arranging conference facilities, lodging, audio-visual needs, registering participants, logistical support for speakers and scientific/technical experts.
- Prepare minutes, summary reports, and proceeding documents and providing FTP sites to store and exchange workshop-related materials and products.

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, shall be obtained by the TOCOR as needed and provided to the CO. Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the TOCOR.

When serving in either a technical or logistical support role at conferences and workshops, Contractor staff shall only attend sessions that are relevant to their role in support of the proceedings. When the Contractor is to conduct training, the EPA will review and approve all materials and courses before presentation, ensuring the training material is factually accurate, and clear in its presentation of the EPA's views, policies, and regulations.

Task 5: Identification of Impaired Waters

The Contractor shall provide technical, logistical and administrative support to the EPA pertaining to the identification of impaired waters, including the development of listing methodologies. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 6: Water Quality Monitoring

The Contractor shall provide support for water quality monitoring pertaining to TMDL development, implementation and TMDL effectiveness. The Contractor shall provide technical, logistical, and administrative support to the EPA in: 1) designing monitoring plans, 2) the field collection of water quality samples, and/or 3) laboratory analysis of water quality samples and assessment of results. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 7: Model Application

The Contractor shall provide technical support for application and/or refinement of modeling tools used for TMDL development and implementation including assessing the impact of point and nonpoint sources on receiving waters and linkages to ground water. The Contractor shall provide technical support for the application of modeling tools for TMDL development and implementation such as determining the point and NPS controls necessary in meeting water quality objectives. This support could include quantifying the loads anticipated to be reduced by specific point or NPS control

approaches, BMP selection or strategies. The Contractor shall develop an EPA-approvable Quality Assurance Project Plan, where appropriate.

Task 8: Peer Review

The Contractor shall provide one or more recognized independent peer-reviewers who will provide impartial evaluations of work products within the scope of this task order, including independent third party peer reviews on the technical approaches and methods (to identify any serious deficiencies and increase confidence in the technical work) of the models and model applications (including sufficiency for regulatory purposes) related to impaired waters and TMDLs. This may also include conducting a blind or anonymous peer review. When conducting peer reviews, the Contractor shall follow the EPA's Science Policy Council Handbook on *Peer Review, 4th Edition*, (EPA EPA/100/B-15/001) (2015). The handbook can be found electronically at the EPA website <http://www.epa.gov/osa/peer-review-handbook-4th-edition-2015>. The Contractor shall discuss coordination, including the specific charge, of peer reviews with the TOCOR pursuant to an approved technical direction.

SCHEDULE OF BENCHMARKS, DELIVERABLES & MILESTONES:

Deliverables and deliverable schedule shall be clarified in the final TD, developed by the TOCOR. The Contractor shall accept or provide comments of each TD in writing within five working days from receipt of each TD. The Contractor shall schedule the conference call to discuss deliverables and project details within five (5) working days of receipt of the draft TD as appropriate. The Contractor shall document the outcomes of this meeting and provide a copy to the TOCOR. The Contractor shall provide the draft written deliverable(s) for review by TOCOR and these deliverables shall be prepared in accordance with the timeframe specified in the Technical Direction to be developed by the TOCOR. The Contractor shall provide the final written deliverable(s) shall be furnished in accordance with the timeframe specified in the Technical Direction.

TASK	BENCHMARK / DELIVERABLE / MILESTONES	SCHEDULE
	Base Period	
1	Kickoff Meeting	Within 10 working days of Task Order Award and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
	OPTION PERIOD 1	
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.

1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 2		
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 3		
1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.
OPTION PERIOD 4		

1	Kickoff Meeting	Within 10 working days of beginning of Option Period 1 and 5 working days after receipt of draft TD by TOCOR.
1	Conference Calls and Meeting Summaries	Draft within 5 business days Final within 5 business days after receipt of comments from the TOCOR
1	Progress Reports & Funding Status Reports by Project	Per contract requirements
2, 3, 4, 5, 6, 7, 8	Comments on draft Technical Direction (TD) provided by TOCOR including estimated hours.	Within 5 business days after receipt of TD.
2, 3, 4, 5, 6, 7, 8	Conduct activities and provide deliverables in accordance with TD.	In accordance with schedule outlined in TD.

The Contractor shall participate in meetings and conference calls arranged by the TOCOR.

The Contractor shall, when requested by the TOCOR, provide supporting documentation when EPA is reviewing draft deliverables to facilitate EPA review and approval of the Contractor's work. Documentation shall include the electronic files and detailed, written explanation of all steps and decisions. The Contractor is expected to comply with this request when it is received from the TOCOR regardless of whether such a request is described in the individual tasks of this PWS or by technical direction. The Contractor is expected to furnish this information in such manner that no proprietary software will be needed for EPA to read, interpret, replicate or model any work product of this agreement, unless otherwise noted in this PWS or by written permission of the TOCOR. The objective is that anyone with the appropriate skill level can use the information produced under this Task Order to check or duplicate the Contractor's work for replication and/or verification. With this understanding of how this Task Order's data will be used, any elements essential to successfully replicating analysis shall be provided to EPA in a commonly-used format.

The Contractor shall provide both scientific/technical and editorial review as defined in section 2.6 of the Prime Contract Performance Work Statement on any Task Order **draft** product before submission to the TOCOR for review. This process does not need to be performed by an independent peer reviewer. It is expected that all editorial review comments will be addressed before deliverables are furnished to the

OCOR for review (in the case of draft deliverables) or acceptance (in the case of final deliverables); and that questions raised by scientific/ technical review will be either addressed or discussed with the TOCOR prior to the Contractor furnishing draft deliverables.

EPA anticipates that the contractor's work will be judged "satisfactory" according to the QASP if TOCOR edits to deliverables are no more than ten percent (10%) of the content of any draft deliverable, or less than two percent (2%) of any final deliverable. In addition, EPA anticipates that the Contractor's work will be judged "satisfactory" according to the QASP if less than ten percent (10%) of the pages of written final deliverables contain TOCOR edits for such things as grammar, punctuation and format. The TOCOR can upon request furnish a copy of the EPA correspondence manual for the Contractor's use.

Upon receipt of written technical direction from the TOCOR, the contractor shall furnish:

- All deliverables (draft and final) to EPA shall be furnished in an electronic version and in an electronic format that EPA can support (see TSAWP Contract PWS Section 4.0 Deliverables).

- All final deliverables to EPA shall include one (1) electronic copy and two (2) paper copies. All final deliverables shall be prepared according to EPA publication guidelines and shall be compliant with Section 508 of the **Americans with Disabilities Act**.

All submittals to EPA shall be formatted as described below.

Electronic submissions shall be made in the following manner: electronic Microsoft Word© for any written reports, summaries or analysis documents, Microsoft Excel© format for any and all spreadsheets, raw data, coding and modeling work (including all model runs with essential data to replicate model runs), and Microsoft Access© format for any and all databases or for other data as is approved by the EPA TOCOR in writing. Final electronic submissions shall be on Compact Disk (CD) or Digital Versatile Disc (DVD). The contractor may utilize an FTP, but only if the EPA TOCOR gives written permission. Every electronic document and all of the sections, text, graphs, charts or figures shall be unlocked, open and editable so that EPA may make further changes.

Unless specified otherwise by the TOCOR, final paper submissions shall be made in the following manner: two (2) separate and identical copies of all deliverables must be submitted; each separate copy includes all the products due at that date (i.e., Task 1, 2, etc.), and must be submitted in one (1) or more bound volumes, as appropriate, with a title page, an executive summary describing the purpose and content, and an index, located inside the front cover of each bound volume, and electronic copies enclosed in envelopes (or other suitable means) bound in the respective volume. Although PDF versions of materials may be additionally submitted per the contractor's prerogative, neither electronic nor paper PDF versions will be acceptable as any final work product.

Appropriate electronic format that is supported by EPA and printing of all GIS data layers, maps, photos, bench sheets and other written material not easily printed or saved in the above formats will be discussed and a format agreed upon with the EPA TOCOR prior to submittal by the Contractor.

When the Task Order reaches 30 calendar days prior to the end of the Period of Performance in a given period, the Contractor shall make a determination that the deliverables, milestones, benchmarks, and any outstanding technical direction from the TOCOR, will be satisfactorily completed in the form requested in the PWS by the end of the Period of Performance and for the remaining funding that is available.

If the Contractor determines one or more of the above-referenced items will not be able to be completed in the requested form within the period of performance and with the available funding, the Contractor shall notify the TOCOR and the CO immediately. Within 5 business days of said notification, the TOCOR in coordination with the CO will provide technical direction concerning use of the remaining funding to prepare and furnish to the TOCOR all interim draft deliverables, interim work products, and any working files in an electronic format which is supported by EPA, for eventual continuation of the project after the end date of the Task Order.

QUALITY ASSURANCE PROJECT PLANS:

EPA policy requires that an *approved* Quality Assurance Project Plan (QAPP) be in place before any work begins that involves the data collection and development of models. Where a project will require a QAPP, the Contractor shall prepare the QAPP in conformance with EPA's *Requirements for Quality Assurance Project Plans (EPA QA/R-5)*, and obtain EPA Region 10 approval for the QAPP. No activities requiring a QAPP shall begin without EPA approval of the QAPP.

CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The EPA projects that none of the individual meetings identified in these tasks will exceed a total cost of

\$20,000. The Contractor shall immediately notify the CO, PO and TOCOR of any anticipated individual event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the CO.

REPORTING:

All documentation and reporting under this TO shall be in compliance with contract requirements.

Additional requirements specific to this TO are as follows:

The Contractor's progress reports shall include, but not be limited to, the following items: Contractor technical lead and status of funds allotted and spent for each project under the TO.

During the period of performance of this TO, the Contractor is expected to immediately inform the TOCOR by telephone of: (1) any problems that may impede the successful completion of the requested items of work; and (2) any corrective actions needed to solve the problem. The Contractor shall address and correct any problems identified by EPA within three days of EPA's written direction.

ANTICIPATED TRAVEL:

All travel under this Task Order shall be in compliance with contract requirements and only according to specific Technical Direction. (See contract clause H-17). For planning purposes, assume two 2-day meetings and/or watershed site visits during the base and each option period would be located in Seattle, Washington.

CONTRACTOR IDENTIFICATION:

The Contractor staff shall be required to identify themselves as contractors whenever their EPA work brings them in contact with the public (such as when they are providing technical information or conducting training and conferences). Contractor staff must always wear Contractor ID badges when interacting with the public. Contractor personnel are prohibited from acting as the Agency's official representative.

The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

MONITORING INFORMATION IN STORET AND FOLLOW-ON DATA SYSTEMS:

Any ambient water quality, chemical, physical, biological, sediment, tissue, and ecological monitoring data collected as part of any this task order shall be entered into STORET or its follow-on data systems and be made available to the EPA in a compatible format. The Contractor shall use its own company name as the entity for data collected by the Contractor when entering its data. The Contractor shall report quality control of the data upload to the EPA.

QUALITY ASSURANCE SURVEILLANCE PLAN:

See contract requirements.

SECTION 508 CCOMPLIANCE

All electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. The Contractor shall include documentation which indicates that the contractor has tested the deliverable against applicable Section 508 Standards.